Mechanical Engineering Workshop

Course Code	19ME3251	Year	I	Semester	II
Course Category	Program Core	Branch	ME	Course Type	Practical
Credits	1.5	L-T-P	0-0-3	Prerequisites	Nil
Continuous Internal Evaluation:	25	Semester End Evaluation:	50	Total Marks:	75

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Demonstrate steps involved in preparing patterns, moulds and sand properties.
CO2	Make various joints using different welding techniques.
CO3	Exhibit press working operations using Hydraulic press.
CO4	Produce various components using plastic molding techniques.

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:High, 2: Medium, 1:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3		1			1			2		2		3	2
CO2	3		1			1			2		2		3	2
CO3	3		1			1			2		2		3	2
CO4	3		1			1			2		2		3	2

Syllabus

Unit No.	Contents	Mapped CO
I	Preparation of single piece pattern Preparation of split pattern Sand Molding Testing Sand Properties	CO 1
II	Arc welding – Two exercises Spot Welding TIG welding Gas Welding	CO 2
III	Piercing and Blanking	CO 3
IV	Injection Molding – Two exercises. Blow Molding.	CO 4

Learning Resources

Text Books

1) Manufacturing Technology: Foundry, Forming, Welding, Volume-1, By P.N.Rao, Mc Graw Hill Education(India Pvt Limited), 5th Edition

2) Manufacturing Processes for Engineering Materials by Serope Kalpakjain, Steven R.Schmid, Pearson Education India 4e